Adopt a Stream

SHORELINE SURVEYS

A Stream Team Monitoring Project and Action Tool

Estuary Data Sheets

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Adapted from Shoreline Surveys Leaders' Manual, Publication No.17795-94-500-2.08 CIR
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ESTUARY SHORELINE SURVEY FIELD DATA SHEET

Segment begins: _____
Segment ends: _____

Date:_____
Observers:_____
Today's weather:_____
Weather over past 24 -48 hours:_____

If you take photographs, mark the location on the map, and write it on the backs of the photos, along with date. Be specific (reference nearby road or house), so that people can compare later photos

INSTREAM CONDITIONS

Stream bottom:

1. What is streambed made of? *Mark from 1 (most typical) to 6 (least typical)*

_____Organic debris (leaves, twigs)
_____Partially decomposed organic matter (peat)
_____Silt (mud)
_____Sand (1/16 to 1/4")
_____Gravel (1/4 - 2")
_____Cobbles (2 - 10")
_____Boulders (> 10")
_____No Assessment

2. What color is the stream bottom? *(Circle One)*

Black Brown Orange/Red Yellow Sandy Gray Other

Water:

3. What Color is the water? *(Circle One)*

Clear Cloudy Tea Milky Muddy Pea soup green (from phytoplankton) Other_____

4. What is the water odor? *(Circle One)*

No odor Rotten eggs Musky Fishy Oily Ammonia Other_____

5. Problem areas. *(checkmark, describe location and cause, if apparent. *Locate on map.)*

___ Oily sheen or smell _____
___ Sewage: smell, milky color, toilet paper _____
___ Foam or scum *(describe. Does a stick break it up?)* _____
___ Fishy odor or fish kill _____
___ Floating garbage _____
___ Excess Sedimentation _____
___ Other _____

6. What is the water clarity? (Can you see an object a foot down?)

7. Are any culverts, storm drains, or bridge crossings impeding tidal flow with closed gates?

8. Is the stream flow blocked by *(circle)* **trees**, **trash**, or **man-made objects**? **If yes locate on map*.

Stream vegetation

9. Is there submerged aquatic vegetation?

(Circle one) **Yes** or **No** **If yes locate on map*

Identify types if possible: ___Eelgrass ___Widgeon Grass ___Rockweed ___Other

10. Are there areas on the stream bed or around pipes that are algae covered? _____

**If algae seems abnormally heavy locate on map.*

STREAM CORRIDOR CONDITIONS

Estuary, Riparian area and Land Use

11. What is the tidal range? (How much does the water fluctuate between low and high tide? Circle)
Less than a foot 1-3 feet 3-6 feet 6-10 feet 10+feet Can't tell

12. What are the current tidal conditions? High, low, incoming, slack, outgoing? (Circle)

13. What is the character of the Estuary? (Circle)
Salt-marsh Barrier Island Rocky Coast Pebble Beach Sand Beach

14. Are there any salt marshes in your section? ___yes ___no *If yes, mark areas on the map.*
Are there low marshes? (Spartina Alterniflora) ___yes ___no
Are there high marshes? (Spartina Patens, D. Spicata) ___yes ___no
Map any areas with---- ___Phragmites ___Purple Loosestrife ___Ditching of marshes

15. Are there sand dunes in your section? ___yes ___no *If yes, mark areas on the map.*
Estimate the dune height: _____feet
Is there erosion or trampled dune grasses? ___yes ___no *If yes, mark areas on the map.*

16. Do trees and shrubs overhang the stream and provide shade?_____
If yes, estimate what percentage of the bank is shaded

17. What are the stream bank conditions? *(circle. Put a star* next to the most common.)*

Eroding	Trees/Shrubs	Grass/Flowers	Loosestrife/Phragmites
Beaches	Riprap/channelized	Shrubs/brambles	Wetlands/marsh

18. Is there a vegetated riparian area beyond the stream bank? If yes, indicate condition.
*(circle. Put a star*next to the most common.)*
Shrubs/grasses mowed pasture/meadow Forested/trees Park with few trees Lawn Dunes
If area is not vegetated, please describe condition: (i.e. parking lot, pavement, roadway, buildings)
_____

19. If the riparian area is forested or in shrubs and grasses, estimate width of the vegetated area (to a lawn, road, or other change in land use) _____

20. Are there places that have fill or clear-cutting? *(circle)* Yes No
If yes, mark locations on map as fill F1, F2, F3. Etc (or clear-cutting CC1 CC2, CC3, etc).

21. What are the land uses visible from the river? (*checkmark and circle the dominant land use type*.)

___ Industrial	___ Parking lots	___ Golf courses
___ Commercial	___ Roads	___ Protected/conservation land
___ Agricultural	___ Landfills	___ Undeveloped/unprotected land
___ Residential	___ Railroads	___ Wastewater treatment plants
___ Park/ ballfields	___ Junkyards	___ Other *(describe)*

22. Do you see runoff from any of the following? *(circle. *If run-off is significant locate on map.)*

Manure	Pet / goose droppings	Parking lots	Sewage	Roads
Bridges	Construction	Plowed fields	Lawns	Other_____

Pipes: Please fill out separate pipe survey and mark locations on map as P1, P2, P3, etc.

Trash: Describe any potential cleanup areas. **Locate on map.*

Potential Open Space: *Describe and locate on map:* _____.

Dams: Mark locations of dams on the map

23. What is the condition of the dam? _____
24. Is fish passage provided? If yes, what is the condition? _____

Recreation

25. Is there designated public access to the stream? Is it appropriate for… *(circle and *locate on map.)*
    Canoeing Fishing Swimming Walking Bicycling Other_____

26. Are there areas which are informal or potential access points? No Yes- *Describe and *locate on map.*

WILDLIFE / HABITAT

Aquatic Habitat/Species

27. Do you see fish or evidence of fish? (describe)_____Estimate number _____
    If possible, describe species & size._____Evidence of fish? (i.e. nests) _____

28. Other forms of aquatic life? *(circle, identify species if known*)
    Aquatic insects Turtles Crabs Snails
    Other_____ Evidence of aquatic species? (i.e. egg sacks, tracks) _____

29. Shellfish: *Indicate on the map if there are densely populated areas of shellfish.*
    ___Clam holes ___Blue Mussels ___Ribbed Mussels ___Oysters ___Horeshoe Crabs ___Can't tell
    Are there clamflats? *If yes, describe and locate on map.*

30. Wildlife and fish habitat elements present in water? *(check)*
    __ Eel Grass beds
    __ Mud flats
    __ Seaweed
    __ Gravel stream bottom
    __ Rocks and boulders in stream
    __ Emergent aquatic vegetation
    __ Vegetation hanging over the banks and water
    __ Fallen trees in water
    __ Undercut banks
    __ Other (describe): _____

Riparian Habitat/Species (look along stream bank and vegetated riparian areas)

31. Animals or evidence of animals? *(circle)*
    Holes Teeth marks Food storage/eating Dens Scat Footprints/tracks Other _____
    Specific animals seen (or evidence of)_____

32. Wildlife habitat elements located near the stream? *(check)*

__Salt marsh vegetation

__Standing dead trees

__Fallen tree limbs and trunks

__Scattered rocks and boulders

__Stone walls (without cement)

__Vines

__Springs and seeps

__Vernal pools

__Other (describe): _____

33. Birds? (circle) Herons/Egrets Ducks Gulls Turns Sand Pipers Osprey
Other_____Evidence of birds: (i.e. nests, footprints) _____

34. Do you know if there are rare & endangered species of plants or animals in your segment? *If so, identify*.

_____

35. Links from riparian area to other areas of wildlife habitat: *(check)*

__Wetlands/marshes adjacent to stream

__Abandoned cropland or pasture near stream

__The riparian area is vegetated with trees and/or shrubs at least 100 feet wide

__The riparian area connects to adjacent open space or greenway

NOTES:

NARRATIVE DESCRIPTION

Describe your segment in a paragraph. (See samples below)

Samples:

Segment 1 extends from the headwaters near Sunshine Drive downstream approximately 0.5 miles and is a seriously damaged portion of the river. Most of the brush has been removed during construction of single family residences thereby reducing bank stability and subjecting the soil to erosion by water. Over 40% of the streambank has been affected to the point that it is now contributing excessive quantities of sediment. Trash, tires and yard debris are commonly seen through out this segment.

Segment 2 flows slowly through this 0.5-mile segment and is virtually undisturbed. The land is owned by the State Department of Fisheries and Wildlife. Vegetation within the upper bank ranges from thick stands of marsh grass to open woods of cedar trees.

Segment 6 flows south between the railroad and Interstate Highway 5 through dense blackberry, willow, marsh and other trees. Surface runoff from light industry at the southern section as well as railroad practices may be contributing sediments, toxins, oils and greases or nutrients.

Samples are taken from EPA's manual Streamwalk.

NARRATIVE DESCRIPTION FOR SEGMENT # ___ OF THE _____(River, Brook). The segment begins at _____ and ends at _____.

Shoreline Survey Priorities for Action

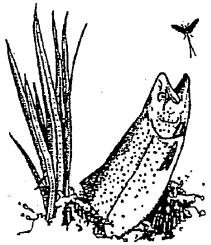
Adopt a Stream

Segment number:_____
Segment Begins: _____
Segment Ends: _____

Look back at your Field Data sheet and include your observations. The information from these sheets will be used to develop the Action Plan.

PROBLEMS:	ASSETS:	PRIORITIES for action:
Problems found in your segment, such as: pipes discharging in dry weather erosion, runoff trash, dense algae water quality problems (odor, color, oil, foam, sewage) degraded wetlands (phragmites, loosestrife) other problems *(describe, give location)*	Assets found in your segment, such as: Good habitat, wildlife species businesses or landowners using the river (in a friendly way) recreational access (canoe, trails, parks) potential recreational access potential park/conservation land *(describe, give location)*	List items from problems/assets columns that you feel need more work.
1.	1.	1.
2.	2.	2.

Adopt-A-Stream Pipe Survey of _____ River/Estuary



Segment #_____ Segment Begins: _____
Date: _____ Segment Ends: _____
Names of observers: _____
Weather today: _____
Weather over past 48-72 hours: _____

Pipe#	Time	**Pipe material and condition**	**Pipe size & amount of flow**	**Color of Flow**	**Odor of Flow**	**Algae below pipe** Yes No Describe extent	**Sediment below pipe**	**Comments? If pipe should be rechecked- describe location**	**GPS Latitude GPS Longitude: (Optional)**
Sample #1	9:33 AM	Concrete in good shape	Constant Moderate Flow 1' diameter	Red-brown	fetid	Green growth coating rocks across the entire stream width and 100 yards upstream.	Sand accumulation at outfall	Should be rechecked. Downstream of Jones St. Bridge	